Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI • EXAMINATION – SUMMER • 2015

Subject Code: 160401 **Date:01/05/2015**

Subject Name: Advanced Molecular Biology- II

Time:10.30AM-01.00PM **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Define the word recombination. Write about molecular mechanism of homologus recombination.	**07**
	(b)	Describe the process of conjugation by *E.coli* F factor.	**07**
Q.2	**(a)**	What do you mean by retrovirus? Give detail about its life cycle.	**07**
	(b)	Write a note on structure of F plasmid.	**07**
		OR	
	(b)	Discuss the process of spliceosome formation and mode of action.	**07**
Q.3	**(a)**	Give detail account on DNA finger printing.	**07**
	(b)	Explain the process of alternative splicing with suitable example.	**07**
		OR	
Q.3	**(a)**	Define the term DNA sequencing. Write in detail about Sanger's method of sequencing.	**07**
	(b)	Elaborate the term gene mapping with suitable examples.	**07**
Q.4	**(a)**	Enlist types of transposable elements. Write in detail about any one.	**07**
	(b)	How transformation is taking place in *Streptococcus pneumonia*? Explain in detail.	**07**
		OR	
Q.4	**(a)**	Write in brief about following terms: (any Two) Linkage disequilibrium, primer walking, marker effect, Lambda phage	**07**
	(b)	List out various applications of generalized transduction with its significances.	**07**
Q.5	**(a)**	Differentiate between generalized and specialized transduction.	**07**
	(b)	Explain the process of formation of F prime.	**07**
		OR	
Q.5	**(a)**	Discuss the mechanism of DNA mobilization with suitable diagram.	**07**
	(b)	Draw neat structure of T4 phage with suitable explanation.	**07**

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